

A NEW MESOAMERICAN QUILLWORT

by Luis D. Gómez P.
Museo Nacional, San José, C. R.

Four species of quillworts are known from Central America, all of them described from Costa Rica and Panamá. Although three taxa have been reported from central Mexico, there are no records from Guatemala, Honduras, El Salvador, Belize and Nicaragua, probably due to the paucity of fieldwork by specialists.

A new species is described from the grasslands of Guanacaste in Costa Rica but the species is also expected in the paludose, south western corner of Nicaragua, as the type locality is only 2-3 mi. from the border.

Isoetes savannarum, sp. nov.

Herba aquatica immersa. Folia usque ad 550 mm longa, erecta, rigida, caespitosa, viridinitentes, trihedrica, 3-carinata, acuminatissima, Junciformes: fasce vasculari 1-centrali; alis hyalinis, 90-120 mm longis, 4-5 mm amplis, immaculatis. Ligula deltoidea, 5-6 mm longa, hyalina, membranoso-carnosa. Velum parvum, in maturitate exsertum, ex labium foveam modum valvatum. Megasporae albae, 500-600 μ m diametro, papillo-tuberculatae, tuberculis 0.015 mm long., rotundatis. Microsporae bilaterales, monoletae, 27(30.75)-34.5 μ m, humiditas tenue avellaneis, albis siccans. Cormus obscure trilobulatus, reductus.

I. panamense Max. & Morton primu adspectu maxime simile sed ab eo foliis longioribus, megasporis latioribus, sporangiis velatis differt.

Holotypus: In pratis inundatis et planietibus paludosis Provinciam Guanacaste inmedationem Crucis, prope loco Tanques dicto, ca. 200 m.s.m., L. D. Gómez 17350 CR. Isotypi: US, F, NY, MO, BM, K. Paratypus: ib. loc., J. Gómez-L. 7088, USJ.

Plants aquatic, submerged or with tips emergent. Corms small, obscurely trilobed. Leaves up to 55 cm long, trihedric, 3-carinate, junciform, vascular bundles 1, central. Diaphragms with large, stellate aerenchyma cells with spinulose walls, spines simple or bifid. Wing 9-12 cm long, 4-5 mm wide near the base, hyaline, tenuous. Ligule 5-6 mm long, deltoid, membranose, with fleshy glossopodium. Velum partial, covering less than one half of the sporangium, in maturity directed upwards and outwards as if hinged from labium of the fovea and thus

valvate in appearance. Megaspores white, 500-600 μm , tuberculate, the tubercles rounded at apex, 0.015 mm long, always free. Microspores monolete, subglobose, white when dry, finely rugose, 27-34.5 μm . Both mega and microsporangia with numerous filiform trabeculae.

The new species is closely related to Isoetes panamensis Maxon & Morton but differs from it in having a partial velum, its longer leaves, much larger megaspores and the finely rugose microspores.

Isoetes savannarum grows in the seasonal and semiseasonal ponds of the northern Guanacaste savannahs in the Curatella-Byrssonima-Gramineae association, together with several sedges, Eriocaulon and an aquatic species of Eryngium.

Other localities in Guanacaste: Laguna Finca Lolita, camino a Cuajiniquil, apx. 3.5 km de Interamericana, 300 m, L.D.Gómez 17944 CR; Laguna, apx. 1 km del cruce Interamericana-Cuajiniquil, 250-280 m, L.D. Gómez 17945 CR; Quebrada Yayal, Finca Pocosol, 4 km al N de la entrada al Parque Nal. Sta. Rosa, apx. 255 m, L.D.Gómez 17946; Charca estacional, 3-4 km al S. de La Cruz, 250-270 m, L.D.Gómez 17947 CR.